Columbia Basin Fish Recovery

SALMON RECOVERY.GOV

Location
Touchet River, Dayton, Washington

Biological Objective
Improve fish passage to spawning areas

ESA Listed Species
- Middle Columbia River Steelhead
- Bull trout

Partners
- Washington Salmon Recovery Funding Board
- US Fish & Wildlife Service Fisheries Restoration & Irrigation Mitigation Program
- US Fish & Wildlife Service Lower Snake River Compensation Program
- Tri-State Steelheaders
- Washington Department of Ecology
- Bonneville Power Administration
- Washington Department of Fish & Wildlife

References
Middle-Columbia River Steelhead Recovery Plan

Touchet River Consolidation

Before: Push-up dikes damaged steelhead-rearing habitat and potentially destroyed nests

The Washington Department of Fish and Wildlife (WDFW) was awarded this grant to consolidate three water diversions into one on the Touchet River in Dayton, Washington.

One diversion occurred at the Dayton Intake Dam, built in 1983 to supply water for a steelhead acclimation pond developed to mitigate for lost fishing recreation caused by construction of the four lower Snake River dams. The pond is operated WDFW and owned by U.S. Fish and Wildlife Service (USFWS). The intake dam was a passage barrier to juvenile salmonids, including Mid-Columbia Basin steelhead and bull trout, as well as other native species like Mountain Whitefish and Bridgelip Suckers.

The original intake fish screens no longer met ESA standards. Within one mile downstream of the dam were two irrigation diversions. Each year these diversions required work in stream to push up gravel and cobble berms to deliver water to their intakes. This practice was typically done between April and June each year. The berms would wash away during winter high flows and deposit upstream from the US Highway 12 bridge. The aggradation of cobbles upstream from the bridge promoted additional concerns about flooding within the channel.

The Dayton Intake Dam has been modified to facilitate irrigation and reduce operating costs while protecting instream flows

The original dam and irrigation diversion conditions represented a number of environmental problems, especially when bull trout and mid-Columbia River steelhead were listed as threatened species under the Endangered Species Act (ESA) in the late 1990's.

For information about Salmon Recovery
www.nwr.noaa.gov/Salmon-Recovery-Planning/ESA-Recovery-Plans/Draft-Plans.cfm

For information on the Touchet River Consolidation Project
http://hws.ekosystem.us/PView.aspx?sid=320&id=2731

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These problems included:

- Poor fish passage over the dam
- Non-compliant fish screens at the dam intake
- Suspected dam structural and safety concerns
- Inadequate fish trap/Management facility
- Stream habitat impacts from irrigation diversion berm construction
- Poor juvenile fish bypass at all diversions
- Diversion berm flood control concerns and impacts

The WDFW District 3 Team supported finding solutions to these problems. Staff met with the Columbia County Conservation District and local irrigators to brainstorm ideas and get local support. The goal was to work collaboratively to solve all of the above listed problems with a project that met local and environmental needs and concerns.

The solution was to utilize the existing concrete dam and intake to consolidate all three diversions. The new intake would be equipped with ESA Compliant Fish Screens, a Pool and Chute Fish Ladder, and an improved fish trapping facility. A pipeline would be built to connect the new diversion point to the existing irrigation ditches. Each irrigation ditch would have a new concrete junction box to manage diversion flows.

The design for the Touchet Consolidation Project (TCP) was funded through a USFWS Fisheries Restoration and Irrigation Mitigation Program (FRIMA) grant and matched by WDFW Habitat Program fish passage funding. WDFW engineers developed the design with coordination from local WDFW staff and local stakeholders. The result of this collaborative process was a design that met the needs of all interested parties. During this time a number of additional partners became involved with the project as funding partners. The TCP had seven funding sources for implementation including Salmon Recovery Funding Board, USFWS FRIMA, USFWS Lower Snake River Compensation Program, Tri-State Steelheaders, Washington Department of Ecology, Bonneville Power Administration, and WDFW. Project construction began in September 2007 and was completed in April 2008.